

U.S. ARMY

**Center for
Army
Analysis**

**THIRD SPECIAL CONFERENCE ON
HISTORICAL DATA ANALYSIS (SCOHDA III)**

MARCH 2000



**CENTER FOR ARMY ANALYSIS
6001 GOETHALS ROAD
FORT BELVOIR, VA 22060-5230**

DTIC QUALITY INSPECTED 3

20000518 009

CAA
CENTER FOR ARMY ANALYSIS

DISCLAIMER

**The findings of this report are not to be construed as an official
Department of the Army position, policy, or decision unless so
designated by other official documentation. Comments or
suggestions should be addressed to:**

**Director
Center for Army Analysis
ATTN: CSCA-CA
6001 Goethals Road
Fort Belvoir, VA 22060-5230**

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 074-0188
<p>Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503</p>			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 2000	3. REPORT TYPE AND DATES COVERED Final, February – March 2000	
4. TITLE AND SUBTITLE Third Special Conference on Historical Data Analysis (SCOHDA III)		5. FUNDING NUMBER N/A	
6. AUTHOR(S) Mr. Duane Gory			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Center for Army Analysis 6001 Goethals Road Fort Belvoir, VA 22060-5230		8. PERFORMING ORGANIZATION REPORT NUMBER CAA-R-00-12	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Director, Center for Army Analysis 6001 Goethals Road Fort Belvoir, VA 22060-5230		10. SPONSORING / MONITORING AGENCY REPORT NUMBER CAA-R-00-12	
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited		12b. DISTRIBUTION CODE A	
<p>13. ABSTRACT (Maximum 200 Words)</p> <p>The Center for Army Analysis hosted the Third Special Conference on Historical Data Analysis (SCOHDA III) from 2-3 March 2000. The purpose of the conference was to provide an exchange between the armies of the United States, United Kingdom, Australia, and France on techniques for examining and uses of data on historical combat operations to support defense planning and analysis.</p>			
14. SUBJECT TERMS Historical data analysis, defense planning, historical combat operations		<p>15. NUMBER OF PAGES 39</p> <p>16. PRICE CODE</p>	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT SAR

THIRD SPECIAL CONFERENCE ON HISTORICAL DATA ANALYSIS (SCOHDIA III)

SUMMARY

THE CONFERENCE PURPOSE was to provide an exchange between the armies of the United States, United Kingdom, Australia, and France on techniques for examining and uses of data on historical combat operations to support defense planning and analysis.

THE CONFERENCE was hosted by the Director, Center for Army Analysis, Fort Belvoir, VA.

THE CONFERENCE OBJECTIVES were to:

- (1) Provide a forum for the exchange of information regarding historical combat operations to support defense planning and analysis.
- (2) Expose participants to recent work being done in the area of historical combat operations.
- (3) Provide an opportunity for analysts to network with others in their community in a multi-national environment.

THE CONFERENCE INCLUDED PARTICIPANTS from the United States, United Kingdom, Australia, and France.

THE PRINCIPAL RECOMMENDATION is to include a biographical profile of each presenter in future conference work book. This would allow participants to have a better understanding of the diversity of backgrounds and depth of knowledge contained within the national delegations.

THE CONFERENCE EFFORT was conducted by Mr. Duane Gory, Conflict Analysis Center, Center for Army Analysis.

COMMENTS AND QUESTIONS may be sent to the Director, Center for Army Analysis, 6001 Goethals Road, Suite 102, Fort Belvoir, VA 22060-5230

(THIS PAGE INTENTIONALLY LEFT BLANK)

CONTENTS

	Page
1 INTRODUCTION	1
1.1 Purpose.....	2
1.2 Background	3
1.3 SCOHDA III	4
1.4 CAA Key Responsibilities.....	5
1.5 Agenda	6
1.6 List of Participants	7
2 SCOHDA III PRESENTATIONS	9
2.1 Abstract (Harding)	10
2.2 Abstract (Glover)	11
2.3 Abstract (Rowland).....	12
2.4 Abstract (Poole)	13
2.5 Abstract (Orgeron).....	14
2.6 Abstract (Helmbold)	15
2.7 Abstract (Applegate).....	16
2.8 Abstract (Morley).....	17
2.9 Abstract (Rowland).....	18
2.10 Abstract (Hossack).....	19
2.11 Abstract (Helmbold)	20
2.12 Abstract (Cozby).....	21
2.13 Abstract (Gardner)	22
2.14 Abstract (Bauman)	23
3 AFTER-ACTION REPORT	25
APPENDIX A. CONFERENCE CONTRIBUTORS	A-1
APPENDIX B. REQUEST FOR ANALYTICAL SUPPORT	B-1

FIGURES

Figure 1. Introduction	1
Figure 2. Purpose	2
Figure 3. Background.....	3
Figure 4. SCOHDA III.....	4
Figure 5. CAA Key Responsibilities	5
Figure 6. Agenda.....	6
Figure 7. List of Participants.....	7
Figure 8. SCOHDA III Presentations	9
Figure 9. Abstract (Harding).....	10

	Page
Figure 10. Abstract (Glover).....	11
Figure 11. Abstract (Rowland)	12
Figure 12. Abstract (Poole).....	13
Figure 13. Abstract (Orgeron).....	14
Figure 14. Abstract (Helmbold).....	15
Figure 15. Abstract (Appleget)	16
Figure 16. Abstract (Morley)	17
Figure 17. Abstract (Rowland)	18
Figure 18. Abstract (Hossack)	19
Figure 19. Abstract (Helmbold).....	20
Figure 20. Abstract (Cozby)	21
Figure 21. Abstract (Gardner).....	22
Figure 22. Abstract (Bauman).....	23
Figure 23. After-Action Report.....	25

1 INTRODUCTION

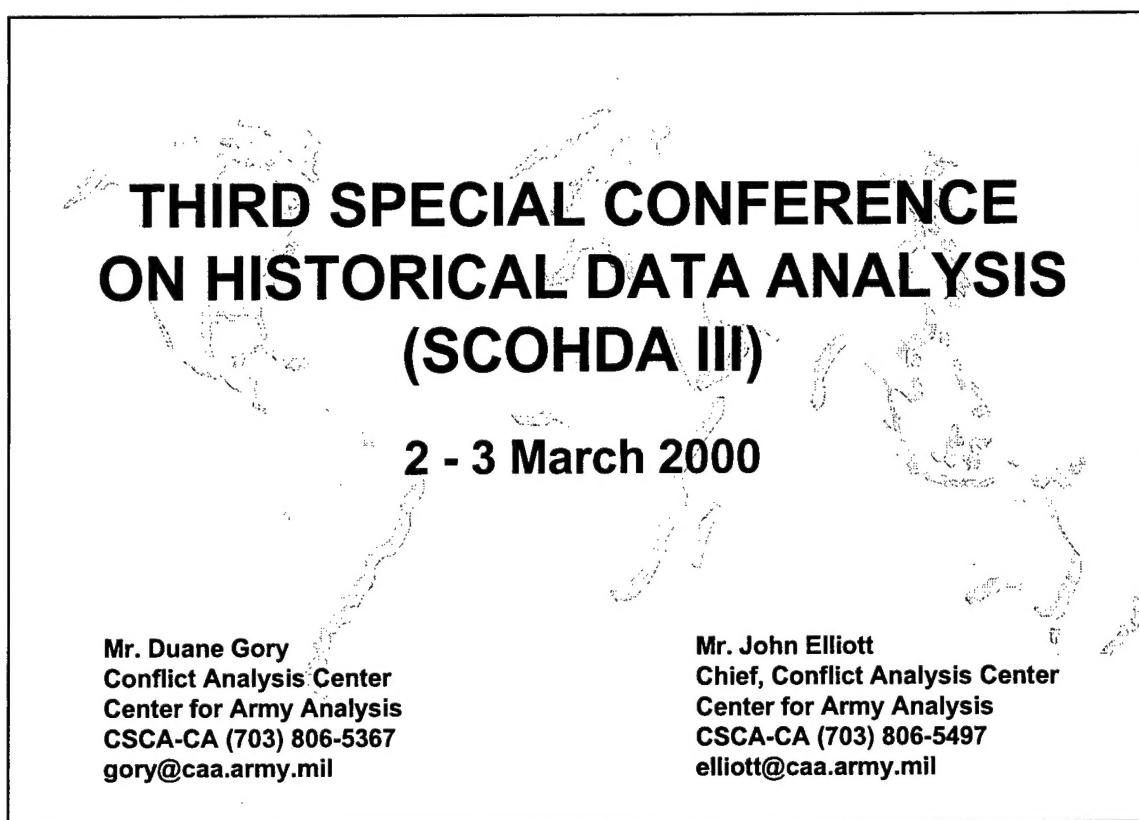


Figure 1. Introduction

This report documents the proceedings from the Third Special Conference on Historical Data Analysis (SCOHDAA III) that was held from 2 through 3 March 2000. SCOHDAA III occurred at the Center for Army Analysis (CAA), Fort Belvoir, Virginia.

1.1 Purpose

SCOHDА III

- To provide an exchange between the armies of the United States, United Kingdom, Australia, and France on techniques for examining and uses of data on historical combat operations to support defense planning and analysis**

Figure 2. Purpose

The purpose of SCOHDА III was to provide an exchange between the armies of the United States, United Kingdom, Australia, and France on techniques for examining and uses of data on historical combat operations to support defense planning and analysis.

1.2 Background

SCOHDAs III

- SCOHDAs is an occasional exchange between the Center for Army Analysis and delegations from other nations to share techniques and explore the uses of historical data on combat operations to support defense planning and analysis
- The first SCOHDAs conference (SCOHDAs I) occurred in 1989
- The second SCOHDAs conference (SCOHDAs II) was conducted in 1995
- Delegations have come from a diverse set of nations
 - United States, United Kingdom, Australia, Canada, France, and Germany

Figure 3. Background

SCOHDAs is a periodical exchange between CAA and delegations from other nations to share techniques and explore the uses of historical data on combat operations to support defense planning and analysis. The first and second conferences, held in 1989 and 1995, respectively, brought together presenters and interested participants from several national delegations. These national delegations have included representatives from the United States, United Kingdom, Australia, Canada, France, and Germany.

1.3 SCOHDA III

SCOHDAs III

- Occurred from 2 - 3 March 2000 at the Center for Army Analysis, Fort Belvoir, Virginia
- National delegations present
 - United States (Co-chair)
 - United Kingdom (Co-chair)
 - Australia
 - France
- 26 participants in total

Figure 4. SCOHDA III

SCOHDAs III was conducted from 2-3 March 2000 at CAA. National delegations at the conference included representatives from the United States, United Kingdom, Australia, and France. Mr. E. B. Vandiver of the United States and Dr. Ian Sharpe of the United Kingdom were Co-chairmen for the conference. There was a total of 26 participants at SCOHDA III.

1.4 CAA Key Responsibilities

SCOHDA III

- Provide a conference facility, to include information technology support**
- Solicit and select topics for presentation**
- Develop conference agenda**
- Provide conference support (refreshments, transportation, security, administration, and others)**
- Produce a CD-ROM that contains conference proceedings**
 - **Distribute to each participant at end of conference**

Figure 5. CAA Key Responsibilities

As the hosts of SCOHDA III, CAA performed several key tasks for conference execution. First, CAA provided a site that was equipped with the appropriate information technology support. The second key task of CAA was to solicit and select papers from the participating national delegations for presentation at the conference. Third, CAA developed a conference agenda and provided the appropriate administrative support (such as refreshments and transportation). Finally, CAA distributed to all SCOHDA III participants a copy of conference proceedings on a CD-ROM. The CD-ROM allowed conference attendees to depart with an electronic copy of many important presentations that were given during the 2-day event. Note that for security reasons, not all presentations were included on the SCOHDA III CD-ROM.

1.5 Agenda

SCOHDA III		
	Topic	Presenter
2 March 2000		
0830-0900	Registration and Coffee	-----
0900-0915	Welcome and Introduction of Delegations	Mr. Vandiver (United States)
0915-0930	Group Photograph	All
0930-1000	The CAA Military History Program	Mr. Vandiver (United States)
1000-1030	The Application of Historical Analysis	Mr. Harding (United Kingdom)
1030-1045	Break	-----
1045-1115	The Simple Battlegroup (SIMBAT) Model	Mr. Glover (United Kingdom)
1115-1145	The Role of Historical Analysis in Army Force Development	COL Baxter (United Kingdom)
1145-1215	The Influence of Nationality Factors on Force Effectiveness	Mr. Rowland (United Kingdom)
1215-1345	Lunch (Fort Belvoir Officers Club)	-----
1345-1415	Historical Analysis of Operations-Other-Than-War	Mr. Poole (United Kingdom)
1415-1445	Stochastic Analysis of Resources for Deployments and Excursions	LTC Orgeron (United States)
1445-1500	Break	-----
1500-1530	Historical Ammunition Rates	Dr. Helmbold (United States)
1530-1600	Data Used to Support the Combat Simulation of Desert Storm	LTC Appleget (United States)
1600-1900	Social/Non-Hosted Dinner at Fort Belvoir Officers Club	All
3 March 2000		
0830-0900	Arrival of Delegations	-----
0900-0930	Historical Analysis of Crisis Feasibility	Mr. Morley (United Kingdom)
0930-1000	Public Opinion and Casualty Levels	Mr. Rowland (United Kingdom)
1000-1030	Trends in Land Combat	Dr. Helmbold (United States)
1030-1100	Break	-----
1100-1130	UK Historical Data Analysis of Air Warfare	Dr. Hossack (United Kingdom)
1130-1200	Findings from Developmental Tests - An Information Source for Warfighters	Mr. Cozby (United States)
1200-1330	Lunch (Fort Belvoir Golf Club)	-----
1330-1400	The Battle of the Atlantic-Giant Database & Workshop: Opportunities for Creative Synergy	Mr. Gardner (United Kingdom)
1400-1430	Quantification of the Battle of Kursk	Mr. Bauman (United States)

Figure 6. Agenda

Shown in Figure 6 is the agenda for SCOHDA III. Listed in the figure are the date and time each presentation was given, the topic of each presentation, and the individual briefing a given presentation.

1.6 List of Participants

SCOHD A III				
RANK/TITLE	FIRST NAME	LAST NAME	NATIONAL DELEGATION	ORGANIZATION
LTC	Jeff	Appleget	United States	TRAC-Monterey
Mr.	Bob	Barrett	United States	Center for Army Analysis
Mr.	Walter	Bauman	United States	CAA-Alumnus
COL	Philip	Baxter	United Kingdom	DLW
BG	John	Brown	United States	Center of Military History
Dr.	Richard	Cave	United Kingdom	BDS(W)
Dr.	Jeffrey	Clarke	United States	Center of Military History
Mr.	John	Coleby	Australia	DSTO
Mr.	Richard	Cozby	United States	Developmental Test Command
Mr.	Arthur	Durrant	United Kingdom	DLW
Mr.	John	Elliott	United States	Center for Army Analysis
MAJ	Steven	Forsythe	United States	AFSAA
Mr.	Jock	Gardner	United Kingdom	Naval Historical Branch
Mr.	Paul	Glover	United Kingdom	CDA(Land/Air)
Mr.	Duane	Gory	United States	Center for Army Analysis
Mr.	John	Harding	United Kingdom	Army Historical Branch
Dr.	Robert	Helmbold	United States	CAA-Alumnus
LTC	Marc	Henry	France	French Mission to SACLANT
Dr.	Andrew	Hossack	United Kingdom	CDA(HLS)
Mr.	James	Morehead	United Kingdom	Army Historical Branch
Mr.	Alistair	Morley	United Kingdom	CDA(HLS)
LTC	Tougy	Orgeron	United States	Center for Army Analysis
Mr.	Nigel	Poole	United Kingdom	CDA(HLS)
Mr.	David	Rowland	United Kingdom	CDA(HLS)
Dr.	Ian	Sharpe	United Kingdom	DSc(Man&CIS)
Mr.	E. B.	Vandiver	United States	Center for Army Analysis

Figure 7. List of Participants

Listed in Figure 7 are the participants of SCOHD A III. The figure shows the name of each participant, the national delegation, and the professional organization the participant represented.

(THIS PAGE INTENTIONALLY LEFT BLANK)

2 SCOHDA III PRESENTATIONS

SCOHDA III	
<input type="checkbox"/> The Application of Historical Analysis (<i>John Harding</i>)	<input type="checkbox"/> Historical Analysis of Crisis Feasibility (<i>Alistair Morley</i>)
<input type="checkbox"/> The Simple Battlegroup (SIMBAT) Model (<i>Paul Glover</i>)	<input type="checkbox"/> Public Opinion and Casualty Levels (<i>David Rowland</i>)
<input type="checkbox"/> The Influence of Nationality Factors on Force Effectiveness (<i>David Rowland</i>)	<input type="checkbox"/> UK Historical Data Analysis of Air Warfare (<i>Andrew Hossack</i>)
<input type="checkbox"/> Historical Analysis of Operations-Other-Than-War (<i>Nigel Poole</i>)	<input type="checkbox"/> Trends in Land Combat (<i>Robert Helmbold</i>)
<input type="checkbox"/> Stochastic Analysis of Resources for Deployments and Excursions (<i>Tougguy Orgeron</i>)	<input type="checkbox"/> Findings from Developmental Tests - An Information Source for Warfighters (<i>Richard Cozby</i>)
<input type="checkbox"/> Historical Ammunition Rates (<i>Robert Helmbold</i>)	<input type="checkbox"/> The Battle of the Atlantic - Giant Database and Workshop: Opportunities for Creative Synergy (<i>Jock Gardner</i>)
<input type="checkbox"/> Data Used to Support the Combat Simulation of Desert Storm (<i>Jeff Appleget</i>)	<input type="checkbox"/> Quantification of the Battle of Kursk (<i>Walter Bauman</i>)

Figure 8. SCOHDA III Presentations

The bulk of conference proceedings were dedicated to individual presentations that revolved around topics relevant to the purpose of SCOHDA III. Shown in Figure 8 is a listing of the presentations given during the 2-day conference, the name of each topic's presenter shown in italics.

Displayed on the next 14 pages are the abstracts for each of the topics cited above. The purpose of these abstracts is to give readers of this report a basic understanding of each presentation that was made during SCOHDA III.

2.1 Abstract (Harding)

SCOHDAs III

The Application of Historical Analysis

By John Harding

This short paper looks at the role and input of the professional in-house military historian to the work of the Defense Analyst and how history supports analysis of both current and future operations and planning.

It covers in outline four areas in which the author's branch of MODUK has an ongoing input to analysis using historical data: current operations; force development and planning; equipment projects; and doctrine.

It further considers the practical aspects of data identification of official, mainly operational and policy data, and the role of the in-house historian in helping to create the right data in the first instance, its retrieval to main archive and subsequent control, survival, and accessibility.

Figure 9. Abstract (Harding)

The abstract for the presentation given by Mr. John Harding of the United Kingdom (Army Historical Branch).

2.2 Abstract (Glover)

SCOHD A III

The Simple Battlegroup (SIMBAT) Model

By Paul Glover

In July 1997, a new simple model became available to CDA (Land/Air) to study tactical interactions at the battlegroup level. This model was called SIMBAT. Unlike previous battlegroup level models in CDA (Land/Air), this model included a simple but explicit representation of human factors. Sensitivity analysis of the SIMBAT model, reported in October 1997, indicated that the inclusion of human factors served to limit the overall casualty level at battle end to levels close to those observed in history. Prior to the introduction of SIMBAT, CDA (Land/Air) battlegroup level models had in general reported casualty levels far in excess of military expectations and historical record. This presentation reviews: the design of the SIMBAT model; a comparison between two historical battles and SIMBAT model runs; a sensitivity analysis of SIMBAT; and notes upon some key insights generated to date.

Figure 10. Abstract (Glover)

The abstract for the presentation given by Mr. Paul Glover of the United Kingdom (CDA-LAND/AIR).

2.3 Abstract (Rowland)

SCOHDAs III

The Influence of Nationality Factors on Force Effectiveness

By David Rowland

This paper offers a review of the work of CDA and its predecessors on historical analysis assessments of effectiveness in combat. The combat degradation of small arms and armor antiarmor combat has been assessed and found to vary between national or cultural groups.

The results form a cohesive set of assessments from the tactical level and relationships to the operational level have also been demonstrated.

Following a recent Ministry of Defense review of the evidence Nationality Factor is now being recommended for use in the OA of land warfighting operations and in support of operational planning.

Figure 11. Abstract (Rowland)

The abstract for the first of two presentations given by Mr. David Rowland of the United Kingdom (CDA-HLS).

2.4 Abstract (Poole)

SCOHD A III

Historical Analysis of Operations Other Than War (OOTW)

By Nigel Poole

Defence operational analysis has about a 60-year history in Britain as a recognised discipline. In that time, the operations that have been analysed have changed from the battles of World War II, through the Cold War to the complex operational environment of the 90s. The modern spectrum of operations covers a broad range of activities sometimes called operation other than war (OOTW). Although the UK has been involved in a great many such operations there has been comparatively little historical analysis to try to understand their primary drivers for military success or failure. The presentation will describe what we mean by OOTW, our problems in collecting data on OOTW, and then give our initial results on the analysis we have made on the UK-led operations in Malaya, Borneo, and Kenya in the 1950s and 1960s. This early analysis suggests that there are close parallels with conventional intensive combat and national resilience factor is evident on both sides of OOTW actions.

Figure 12. Abstract (Poole)

The abstract for the presentation given by Mr. Nigel Poole of the United Kingdom (CDA-HLS).

2.5 Abstract (Orgeron)

SCOHD A III

Stochastic Analysis of Resources for Deployments and Excursions

By Tougy Orgeron

Objectives for the Stochastic Analysis of Resources for Deployments and Excursions (SARDE) include the development and demonstration of a methodology to predict the requirement for Army units, by type, needed to support simultaneous small-scale contingencies (SSC) in the future. SARDE extended the approach used in the Stochastic Analysis of Deployments and Excursions (SADE) Study, which modeled the arrival of SSCs in a manner similar to the way customers are serviced by business representatives in banks, stores, etc. The US military servicing the arriving SSC is modeled as a queuing system using computer simulation. SARDE applies either the appropriate mission task organized force (MTOF) or appropriate historical force list to the SSC as it arrives into the queuing system and accounts for the units used to service the mission. The total quantity of each unit type used in each time period (month) is recorded. The simulation is replicated and, based on statistical analysis, a probability distribution is generated that describes the usage of each type unit. The requirements generated by the SARDE process are then compared to requirements for units as determined in other analytical methodology for determining force structure, and to the present composition of the Army force structure. Thus, the anticipated use of forces in future SSCs can be robustly quantified. This information can be incorporated into the overall force structure decision making process.

Figure 13. Abstract (Orgeron)

The abstract for the presentation given by LTC Orgeron of the United States (Center for Army Analysis).

2.6 Abstract (Helmbold)

SCOHDAs III

Historical Ammunition Rates

By Robert Helmbold

HAMMUR (Historical Ammunition Rates) was a Research Analysis Activity (RAA) sponsored by the Center for Army Analysis (CAA). It was initiated 1 July 1997 and completed in April 1999. Its objective was to study US Army ammunition consumption experience. The method used was to prepare a bibliography of relevant past work, convert most of the important data to electronic form for analysis, and perform selected analyses to derive information useful in US Army wargames, studies, and analyses. Its scope included conventional ammunition only. Only actual historical combat data were used (not training, exercises, simulations). Emphasis was on works in the English language. No original archival research was attempted. Emphasis was almost entirely on US experience.

Reference: *Historical Ammunition Expenditures, Center for Army Analysis Memorandum Report CAA-MR-99-1, March 1999, UNCLASSIFIED, AD-TBD.*

Figure 14. Abstract (Helmbold)

The abstract for the presentation given by Dr. Robert Helmbold of the United States (Center for Army Analysis Alumnus).

2.7 Abstract (Applegate)

SCOHDAs III

Data Used to Support the Combat Simulation of Desert Storm

By Jeff Applegate

Desert Storm provided a unique opportunity to showcase the ability of the theater-level model, CEM, to provide a quick reaction analysis (QRA) capability to the US Army's Deputy Chief of Staff for Operations and Plans (DCSOPS). In order to accomplish this, data was rapidly collected, analyzed, and triaged (accepted, discarded, or modified) for use in the simulation. This presentation examines the myriad sources of data used in CAA's Desert Storm modeling with CEM, and the implications and impacts various data elements had on the outcomes that CEM predicted.

Figure 15. Abstract (Applegate)

The abstract for the presentation given by LTC Applegate of the United States (TRADOC Analysis Center-Monterey).

2.8 Abstract (Morley)

SCOHD A III

Historical Analysis of Crisis Feasibility

By Alistair Morley

The paper presents initial Historical Analysis findings into the feasibility of analysing UK involvement in foreign policy crises and the force deployments stemming from them. The requirement comes from the UK joint force headquarters for a decision tool to enable them to allocate planning and tasking resources more efficiently between the variety of potential crisis tasks presented to them on a regular basis.

The paper discusses various conceptual models and presents alternative paths of analysis. Firstly, a broad external analysis of crisis types, or those parameters associated with UK involvement in a foreign policy crises, and the probability of forces being deployed to support national objectives in each case. Secondly, a more detailed internal examination of decision points and escalation within crises. Problems, in terms of data availability, scaling of parameters, etc., will be examined, and it is hoped that the results of a preliminary analysis will also be available for discussion.

Figure 16. Abstract (Morley)

The abstract for the presentation given by Mr. Alistair Morley of the United Kingdom (CDA-HLS).

2.9 Abstract (Rowland)

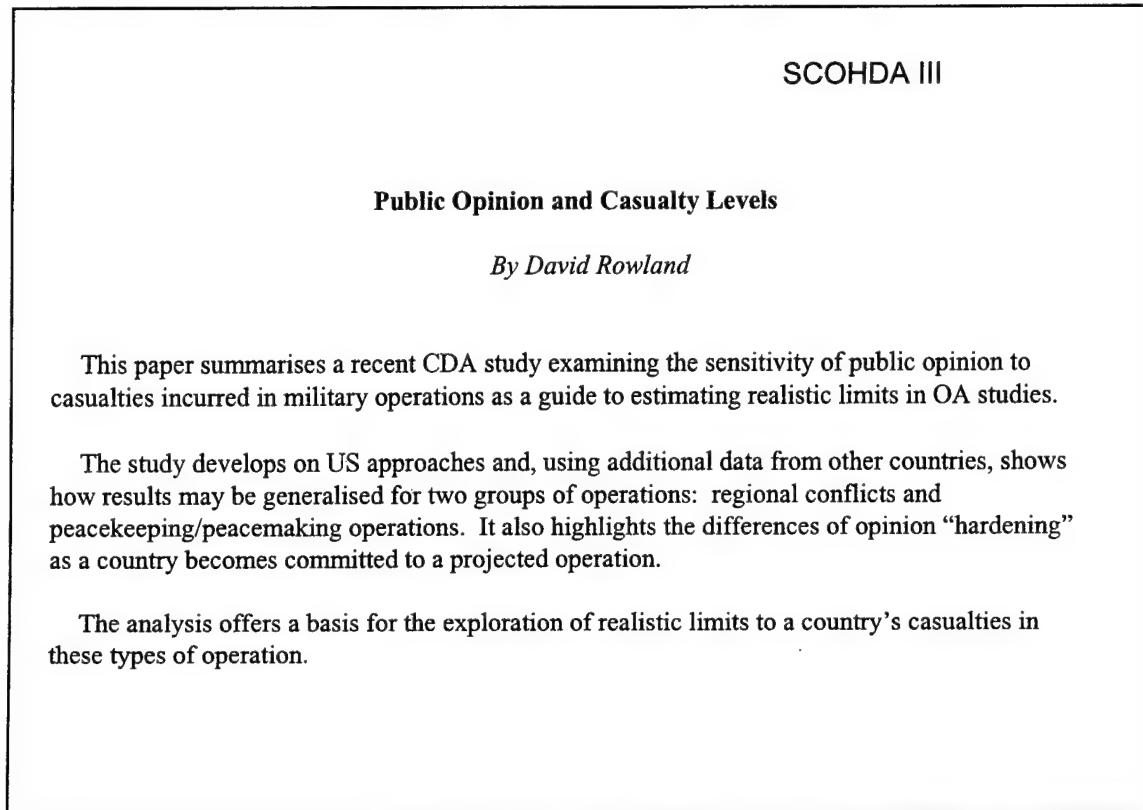


Figure 17. Abstract (Rowland)

The abstract for the second presentation given by Mr. David Rowland of the United Kingdom (CDA-HLS).

2.10 Abstract (Hossack)

SCOHD A III

UK Historical Data Analysis of Air Warfare

By Andrew Hossack

A brief overview is given of CDA's work on the historical data analysis of air warfare over the last 3 years. Previous studies to investigate the existence of combat degradation effects in air-air combat at the engagement level are summarised and a simple Lanchester model of air combat presented. Current work on the existence of national variation in air-air combat is briefly discussed. The remainder of the presentation is given over to a more detailed description of current work being undertaken into strategic air power and air interdiction, including a discussion of the first interim results for the effects of air interdiction on the land campaign and the interactions between different types of strategic effects.

Figure 18. Abstract (Hossack)

The abstract for the presentation given by Mr. Andrew Hossack of the United Kingdom (CDA-HLS).

2.11 Abstract (Helmbold)

SCOHDAs III

Trends in Land Combat

By Robert Helmbold

TLC (Trends in Land Combat) is perhaps more correctly entitled "Some Selected Trends in Land Combat." The work was done during Mar-Jun 1998 for OSD's Office of Net Assessment to support their summer study of revolutions in war. Its purpose was to examine trends in land combat that have persisted over extended periods of time (decades or centuries). The approach was to make maximum use of existing US Army Concept Analysis Agency (CAA) studies and data bases. Original analyses were performed only as necessary. Its focus was on land combat operations and its scope included:

- Rates of advance
- Battle durations
- Personnel strengths and attrition
- Evolution of US Army force structure
- Lanchester parameter values
- Frequency and severity of wars

Reference: *Trends in Land Combat (TLC)*, US Army Concepts Analysis Agency Memorandum Report CAA-MR-98-10, June 1998, UNCLASSIFIED, AD-A344-866/PAA.

Figure 19. Abstract (Helmbold)

The abstract for the presentation given by Dr. Robert Helmbold of the United States (Center for Army Analysis Alumnus).

2.12 Abstract (Cozby)

SCOHD A III

Findings from Developmental Tests – An Information Source for Warfighters

By Richard Cozby

The Developmental Test Command (DTC) is finalizing an historical knowledge base of findings from tests conducted at its test centers over the past 20-years. This source of information, Historical Information for VISION Excellence (HIVE), is being loaded first with findings and backup data from DTC environmental test centers--Cold Regions, Tropic Regions, and Desert. These findings and data spell out what natural and induced factors in battlefield environments affect what types of materiel systems in particular ways. This paper presents the organization of the information and demonstrates how such information may be retrieved depending on the users' specific needs for knowledge from developmental tests. The resulting ground truth data from past tests serves as a guide to warfighters who need to know technical details of past system performance.

Figure 20. Abstract (Cozby)

The abstract for the presentation given by Mr. Richard Cozby of the United States (Developmental Test Command).

2.13 Abstract (Gardner)

SCOHDAs III

The Battle of the Atlantic - Giant Database and Workshop: Opportunities for Creative Synergy

By Jock Gardner

It may seem a little strange to put forward a conflict which started over 60 years ago as being not merely a suitable subject for study by historians but also of value to contemporary practitioners of operational analysis (OA). It is the contention of this paper that the proper investigation of the Battle of the Atlantic can meet these dual, apparently conflicting, requirements. Further, it is suggested that the considerable resource of the surviving material has been underutilized by both historians and the OA profession. Perhaps even more importantly, both disciplines can learn from the practices of the other, and the resultant cross-disciplinary work can only benefit understanding of both historical and contemporary, as well as future problems.

Figure 21. Abstract (Gardner)

The abstract for the presentation given by Mr. Jock Gardner of the United Kingdom (Naval Historical Branch).

2.14 Abstract (Bauman)

Quantification of the Battle of Kursk

By Walter Bauman

The Kursk Operation Simulation and Validation Exercise-Phase II (KOSAVE II) was performed to develop and document a statistical record of the Kursk Battle from the Kursk Data Base (KDB). The study objectives were to assess results and trends from the KDB associated with the status of units and combat postures, casualties and weapons losses, ammunition, aircraft sorties, and geographic unit positions and progress on the southern front of the Kursk Battle, as represented in the KDB historical data. Principal study findings included:

1. A considerably larger fraction of the German units in the campaign was engaged in combat and incurring casualties for a longer time than was the case for Soviet units. The majority of German units were continually attacking until 12 July 1943, but all had ceased attacking by 17 July. The Soviets defended until they counterattacked on 12 July.
2. German progress peaked on 16 July at 46 km northern advance from initial positions.
3. Daily Soviet personnel casualties and casualty rates were much higher than German. The Germans also consistently destroyed tanks and heavy antitank weapons in the Soviet force at a much higher rate than the Soviets achieved against them. However, high fractional exchange ratios in favor of the Germans were sporadic and not sustained during the campaign.
4. Over the campaign, the Soviets consumed 44 % more tank/antitank ammunition than the Germans. The Germans expended three times the Soviet artillery tonnage, two times the rocket tonnage, and three times the small arms tonnage expenditure.
5. The Germans generated more tactical aircraft sorties than the Soviets. The majority of sorties were ground attack for the Germans, and air-to-air for the Soviets.

Figure 22. Abstract (Bauman)

The abstract for the presentation given by Mr. Walter Bauman of the United States (Center for Army Analysis Alumnus).

(THIS PAGE INTENTIONALLY LEFT BLANK)

3 AFTER-ACTION REPORT

- Include biographical profile of each presenter in conference work book**

Figure 23. After-Action Report

There was one key recommendation made by several conference participants after the conclusion of SCOHDA III. Some individuals expressed a desire to have a biographical profile of each presenter. This would have allowed participants to have a better understanding of the diversity of backgrounds and depth of knowledge contained within the national delegations. A key recommendation for the next SCOHDA event is to make such a biographical profile available to all conference participants.

(THIS PAGE INTENTIONALLY LEFT BLANK)

APPENDIX A. CONFERENCE CONTRIBUTORS

1. STUDY TEAM

a. Study Director

Duane Gory

b. Team Members

MAJ Howard A. Hall

Mr. Robert W. Barrett

APPENDIX B. REQUEST FOR ANALYTICAL SUPPORT

REQUEST FOR ANALYTICAL SUPPORT

P	Performing Division: CA		Account Number: 2000116	
A	Tasking: Verbal		Mode (Contract-Yes/No): No	
R	Acronym: SCOHDA III			
T	Title: Third Special Conference on Historical Data Analysis			
1	Start Date: 01-Feb-00		Estimated Completion Date: 03-Mar-00	
	Requestor/Sponsor (i.e., DCSOPS): CAA		Sponsor Division:	
	Resource Estimates:		a. Estimated PSM: 2	b. Estimated Funds: \$0.00
	c. Models to be Used: None			
	Description/Abstract: To design, execute, and provide support to the Third Special Conference on Historical Data Analysis.			
Study Director/POC Signature: <i>Duane Gory</i>			Phone#: 703-806-5367	
Study Director/POC: Mr. Duane Gory				
<i>If this Request is for an External Project expected to consume 6 PSM or more Part 2 Information is Not Required. See TAB C of the Study Directors' Guide for preparation of a Formal Study Directive</i>				
P	Background: The Center for Army Analysis will host the Third Special Conference on Historical Data Analysis from 2-3 March 2000.			
A				
R	Scope: 1) Design the structure for the conference; 2) perform all preparatory tasks; 3) provide ongoing support during conference proceedings.			
T				
2	Issues:			
Milestones: 1) Complete all preparatory tasks by 1 March. 2) Provide continuing support to the conference from 2-3 March.				
Signatures		Division Chief Signature: <i>J. Elliott</i>		Date:
Division Chief Concurrence: Mr. John Elliott				
Sponsor Signature:		Date:		
Sponsor Concurrence (COL/DA Div Chief/GO/SES): CAA				

Entry Date: 25-Feb-00**Print Date:** 25-Feb-00